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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/304,841	05/05/1999	MASAYASU KOYAMA	Q54287	1233

7590 01/29/2002

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EXAMINER
PATTERSON, MARC A

ART UNIT	PAPER NUMBER
1772	14

DATE MAILED: 01/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS -4

Office Action Summary	Application No.	Applicant(s)	
	09/304,841	KOYAMA ET AL.	
	Examiner	Art Unit	
	Marc A Patterson	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8 and 10-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

WITHDRAWN REJECTIONS

1. The 35 U.S.C. 102(b) rejection of Claims 1 – 7 and 12 – 13 as being anticipated by Otaki et al (U.S. Patent No. 5,908,676) and the 35 U.S.C. 103(a) rejection of Claims 8 – 11 as being unpatentable over Otaki et al. (U.S. Patent No. 5,908,676), of record in the previous Action, are withdrawn.

REPEATED REJECTIONS

2. The 35 U.S.C. 103(a) rejection of Claims 14 – 15 as being unpatentable over Otaki et al (U.S. Patent No. 5,908,676) in view of Koyama et al (U.S. Patent No. 5,274,024), of record in the previous Action, is repeated.

NEW REJECTIONS

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 5 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to Claim 1, the term 'blends' is indefinite, since the Specification discloses only one blend (page 16, for example). A mixture of blends, also, is a blend. The term 'compression degree' in Claim 1 is also indefinite; the definition which is given in the Specification, a 'degree of flatness,' is not adequate to quantitatively understand the term. Claim 1 also claims the aspect ratio of a spindle – shaped particle, and it is not clear what ratio is

being claimed (the ratio of the diameter to length?). With regard to Claim 5, the term 'iron – type' is indefinite. For purposes of examination, the term will be assumed to mean 'iron.' Correction and / or clarification is required.

5. The term "flat" in claim 1 is a relative term which renders the claim indefinite. The term "flat" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For purposes of examination, the term will be assumed to mean a particle having a diameter of 5 μm or less. Correction and / or clarification is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1 – 6, 8 and 10 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otaki et al. (U.S. Patent No. 5,908,676).

With regard to Claims 1 – 6, 8 and 11 – 13, Otaki et al. disclose a thermoplastic resin composition, containing an oxygen absorbing agent, which is intended for use in the making of bottles (containers). The composition comprises an elastomer and a thermoplastic resin. Ethylene – propylene rubber which is partially crosslinked is the elastomer, and polypropylene the

thermoplastic resin (the blend is substantially non – compatible, since the rubber is partially crosslinked; column 4, lines 52 – 65). The mixing ratio is 1:1 (no particular restriction is put on the mixing ratio; column 4, lines 67 – 68; column 5, lines 1 – 12). A multi – layer laminate is made by adding layers of thermoplastic resin to both sides of a layer of the oxygen – absorbing layer (column 7, lines 40 – 55). An iron oxygen absorbing agent is contained in the blend in an amount of 10 – 70% by weight (column 6, lines 39 – 48). The absorbing agent is preferably iron powder (which therefore functions as a reducing iron powder, and which therefore has a density of not larger than 2.2 g/cc) with metal halide powder (an oxidation promoter) adhered to the surface. The average particle diameter of the iron powder is 50 μm or less, and the amount of the metal halide powder is present in the amount of 0.1 to 10% by weight with respect to the iron powder (column 6, lines 5 – 30). Otaki et al fail to disclose an oxygen – absorbing agent particle having an aspect ratio of 0.6 or below, and an oxygen – absorbing agent particle having a specific surface area of at least 0.5 m/g. However, Otaki et al disclose an oxygen – absorbing agent particle having at least two diameters of 50 μm or less (an average diameter of 50 μm or less; column 4, lines 52 – 65). It would be obvious for one of ordinary skill in the art to vary the one of the diameters disclosed by Otaki et al (which will determine the aspect ratio and surface area) since the diameters would be readily determined through routine optmization by one having ordinary skill in the art depending on the desired end result. *In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

With regard to the claimed aspect of the composition comprising a 'multilayer distributed structure,' Otaki et al teach that a multilayer distributed structure is equivalent to a single layer distributed structure (multilayer morphology is equivalent to a single layer morphology; column

8, lines 51 – 62). The claimed aspect of the composition comprising a 'multilayer distributed structure' therefore reads on Otaki et al.

With regard to the claimed aspect of the average particle diameter being measured by laser scattering, the method of measuring the average particle diameter is given little pantentable weight.

With regard to Claim 10, the scope of the claims falls within the limitations of Otaki et al. as discussed above. The method of making the iron powder (product – by – process) is given little patentable weight. Applicant would need to demonstrate, by verified showing, the unexpected advantages accruing from the method of dry milling as claimed.

ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of Claims 1 – 7 and 12 – 13 as being anticipated by Otaki et al (U.S. Patent No. 5,908,676) and the 35 U.S.C. 103(a) rejection of Claims 8 – 11 as being unpatentable over Otaki et al. (U.S. Patent No. 5,908,676) have been carefully considered and have been found to be persuasive. The rejections are therefore withdrawn. The new 35 U.S.C. 112, second paragraph rejection of Claims 1, 5 and 8 and 35 U.S.C. 103(a) rejection of Claims 1 – 6, 8 and 10 – 13 as being unpatentable over Otaki et al. (U.S. Patent No. 5,908,676) above is directed to amended Claims 1 – 6, 8 and 10 – 13. The rejections are also directed to dependent Claims 14 and 15, as Applicant's only argument for the allowability of these claims is the allowability of Claim 1.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-2364. FAX communications should be sent to (703) 305-3599. FAXs received after 4 P.M. will not be processed until the following business day.

M.A.P.
M.A.P.

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/28/02